Preliminary Draft

End Stage Renal Disease Services

Of

Chronic/Long Term Care Chapter

District of Columbia State Health Systems Plan

State Health Planning and Development Agency
District of Columbia
Department of Health

END STATE RENAL DISEASE SERVICES

TABLE OF CONTENTS

END STAGE RENAL DISEASE SERVICES

I. INTRODUCTION

End Stage Renal Disease (ESRD), or chronic kidney failure, occurs when the kidneys suffer permanent irreversible damage and are no longer capable of filtering waste products from the blood. The leading cause of kidney failure is adult-onset diabetes mellitus, accounting for 35 percent of new cases each year (National Kidney Foundation, 2001a). The second leading cause is high blood pressure, accounting for 30 percent of U.S. cases of ESRD. Other causes include glomerulonephritis,[1] polycystic kidney disease[2], and substance abuse. The disease affects both adults and children. Upon diagnosis of ESRD, the patient needs either renal dialysis or a transplant to stay alive.

According to the U.S. Renal Data System (2001), in 1999 there were 344,320 ESRD patients in the United States, up from 179,509 in 1990—a 91.8 percent increase. African Americans tend to develop kidney failure at an earlier age than their white counterparts, with a mean age of 59 years for the start of ESRD treatment, compared with 66 years for Caucasians. African Americans are twice as likely as whites to have high blood pressure and tend to have more severe cases of this condition (National Kidney Foundation, 2001d).

African Americans also suffer disproportionately from diabetes: for every white American who gets diabetes, 1.6 blacks contract this disease. The largest proportion of new ESRD cases in the general population is a result of diabetes. However, among African Americans, high blood pressure is the most common cause. In 1998, African Americans accounted for 12 percent of the U.S. population but represented 40 percent of the total patients treated for kidney failure (National Kidney Foundation, 2001d).

It follows from the preceding information that the problem of ESRD is greater in the District, with its majority of African Americans, than in other parts of the country. According to the Mid-Atlantic Renal Coalition (MARC), the District's incidence rate has been steadily increasing since 1996, when the incidence rate was 72.7 per 100,000 ³, to 80.9 per 100,000³ in 2001, representing approximately two and one-half times the national rate of 31.8 per 100,000³ ESRD cases. In 1999, the District's ESRD incidence rate was the highest in the nation at 80.5 per 100,000³ persons.

The primary focus of this chapter is in-facility chronic hemodialysis services for adults and children, as well as, home hemodialysis and home dialysis training capacity. The following topics will be discussed:

- National, regional, and local trends in prevalence, incidence, and utilization trends;

[1] An inflammation of the kidneys involving the glomeruli, or clusters of capillary blood vessels in the kidney that are enclosed by thin walls.

[2] A disorder in which clusters of noncancerous lesions develop within the kidneys and other organs.

- Significant issues regarding ESRD services, including dialyzer reuse, the use of staff-assisted dialysis in nursing homes, and proposed ESRD facility licensure;
- Current ESRD treatment facilities and training programs for home hemodialysis and continuous ambulatory peritoneal dialysis in the District of Columbia;
- Projected need for in-facility hemodialysis services from 2003 through 2008;
- Criteria and standards for availability, accessibility, quality, continuity; acceptability, and cost for all facilities; and,
- Goals and objectives.

Also addressed, are the acute care dialysis services offered by D.C. hospitals for both pediatric and adult patients admitted for complications of ESRD, emergency hemodialysis, and other acute conditions. As is the case with chronic hemodialysis, acute hemodialysis services are subject to the Certificate of Need process.

II. BACKGROUND AND TRENDS

A. History

Prior to 1972, individuals with a diagnosis of ESRD had very little chance of survival. Dialysis and kidney transplantation were experimental procedures performed at only a few medical centers throughout the country. These treatment options were also too expensive for most Americans to afford (Rettig et al., 1991). In 1972, the Social Security Act was amended to extend Medicare coverage to all persons, regardless of age, who experience permanent kidney failure and require dialysis treatment or a kidney transplant. In order to qualify for Medicare coverage, a patient must have Social Security credits based upon his or her work experience or the work experience of a spouse or parent. Medicare coverage can begin when the dialysis treatments are initiated. However, if the patient is employed, the Balanced Budget Act of 1997 requires that Medicare become the secondary payer for the first 30 months of treatment (U.S. Congress, 1997).

As soon as an ESRD patient is placed on dialysis, there is a need for close coordination among the numerous professionals and facilities. In an effort to ensure this coordination, Public Law 92-603 created 18 regional networks of ESRD providers to serve as a liaison between the Centers for Medicare and Medicaid Services (CMS), formerly Health Care Financing Administration (HCFA) and hospitals and health facilities providing ESRD services. Each network includes representatives from every Medicare-certified renal care facility in the region. CMS establishes national ESRD goals, and each network is responsible for developing objectives and activities to support these goals. The District of Columbia is part of Network 5, which also includes Virginia, West Virginia, and Maryland.

B. Prevalence and Incidence of ESRD

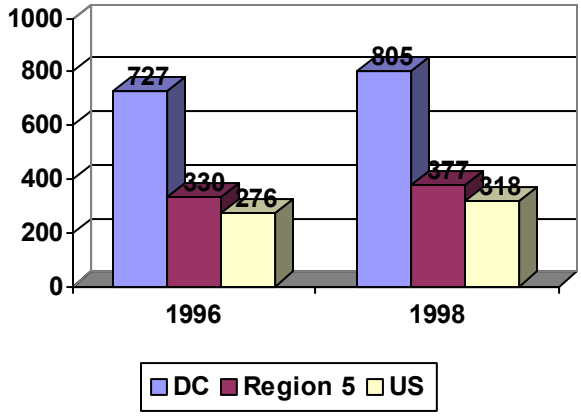
According to the National Kidney Foundation (2001c), the number of Americans with diabetes increased by 33 percent from 1990 to 2000, primarily as a result of an increase in obesity. Some 16 million Americans have diabetes, with the number expected to rise

to 22 million by 2025. Diabetes, as previously mentioned, is the most common cause of new cases of kidney failure in the United States each year. The number of patients being treated for ESRD in the United States nearly doubled between 1990 and 1999. This increase is attributed to the aging of the generation of "baby boomers" and the broadening of diagnostic criteria for Medicare eligibility.

1. Incidence

From 1996 to 1998, incidence rates of ESRD rose locally, regionally, and nationally. As shown in Figure 1, the District ESRD incidence rate (new cases per million population) is higher than both the national and Network 5 figures.

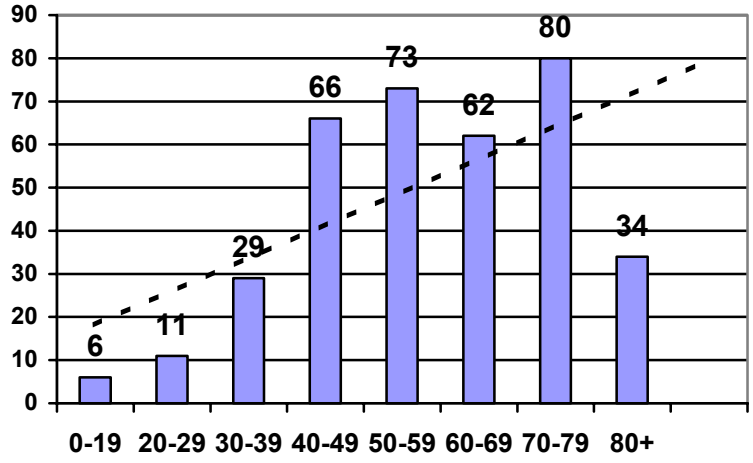
Figure 1. New Cases of ESRD Per Million Population in D.C., Network 5, and the U.S., 1996 and 1998



SOURCE: Mid-Atlantic Renal Coalition 1999 Annual Report

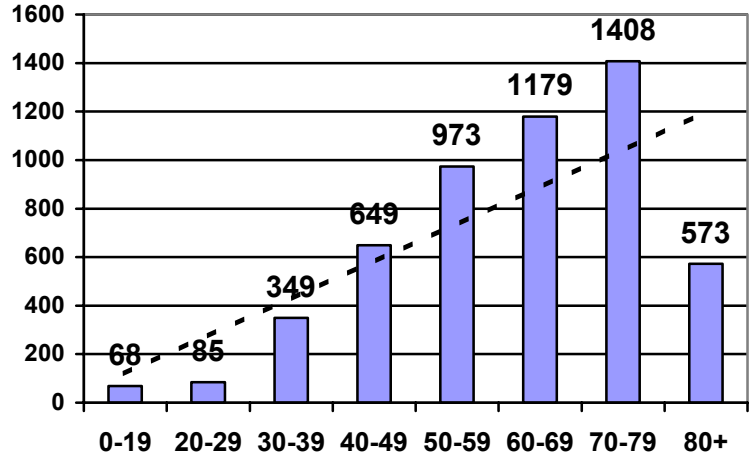
Figures 2 and 3 show the number of new ESRD cases in the District and Network 5 in 1999.

Figure 2. Newly Diagnosed Chronic ESRD Patients by Age in the District, Calendar Year 1999 (N = 364)



SOURCE: Mid-Atlantic Renal Coalition 1999 Annual Report

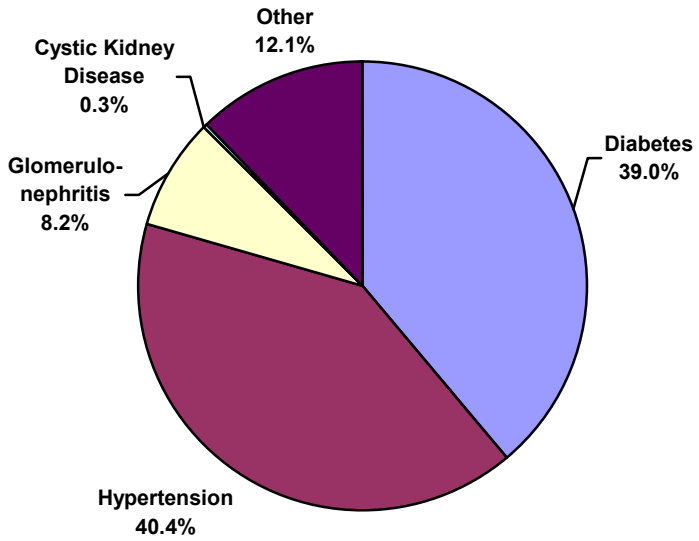
Figure 3. Newly Diagnosed Chronic ESRD Patients by Age in Network 5, Calendar Year 1999 (n = 6675)



SOURCE: Mid-Atlantic Renal Coalition 1999 Annual Report

Figures 2 and 3 show that in 1999, a larger proportion of newly diagnosed ESRD patients in the District ranged between the ages of 40 and 59 than was observed regionally, where a steady increase was observed from ages 30 through 79. Part of the explanation for this finding can be seen in Figures 4 and 5, which illustrate the primary diagnoses of patients in the District and Network 5 in 1999. As is apparent, hypertension accounts for the largest proportion of new cases in the District, whereas diabetes accounts for the largest proportion in the region, consistent with the nation as a whole (National Kidney Foundation, 2001a). Because hypertension can quickly lead to ESRD, it may account for the lower age ranges in which District residents develop this condition.

Figure 4. Newly Diagnosed Chronic ESRD Patients by Primary Diagnosis in DC, Calendar Year 1999 (n = 364)



SOURCE: Mid-Atlantic Renal Coalition 1999 Annual Report

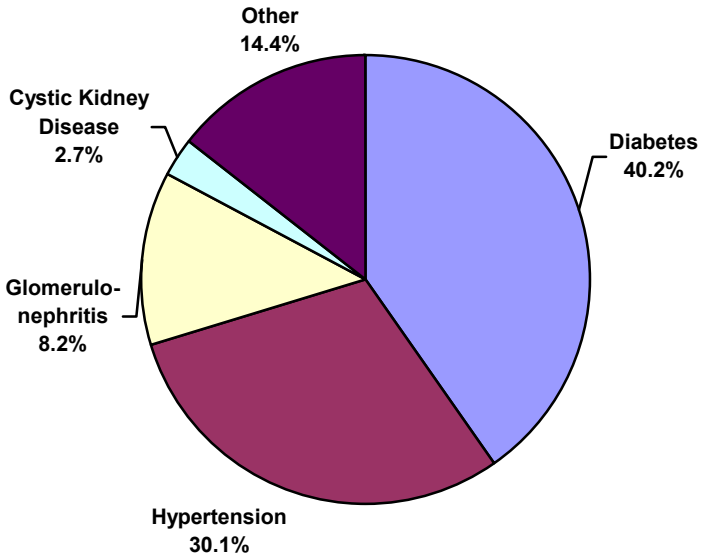
2. *Prevalence*

As was previously mentioned, there was a 91.8 percent increase in the number of patients in the United States who had ESRD between 1990 and 1998. According to the Mid-Atlantic Renal Coalition (MARC, 2000), on December 31, 1999, there were 16,779 ESRD patients residing in the states included in Network 5 and 1,581 patients in the District. Males were slightly over-represented in the ESRD population, accounting for 52.4 percent of Network 5 patients

3. *Mortality Rates*

In the District and Network 5, the mortality rates for ESRD patients are lower than the national rates (MARC, 2000). In 1998, the mortality rate for ESRD patients in the District was 16.2 percent. The rate for the network was 19.0 percent. Most deaths in the District among ESRD patients in 1998 were caused by heart conditions (45.5 percent), unknown causes (17.6 percent), and infection (18.9 percent). (See Figure 8.)

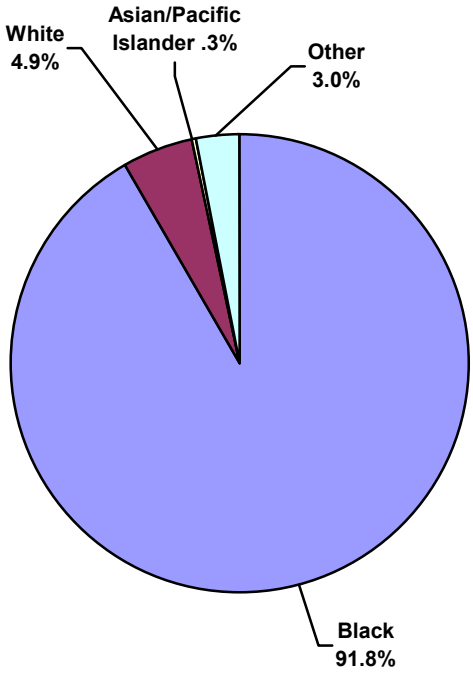
Figure 5. Newly Diagnosed Chronic ESRD Patients by Primary Diagnosis in Network 5, Calendar Year 1999 (n = 6675)



SOURCE: Mid-Atlantic Renal Coalition 1999 Annual Report

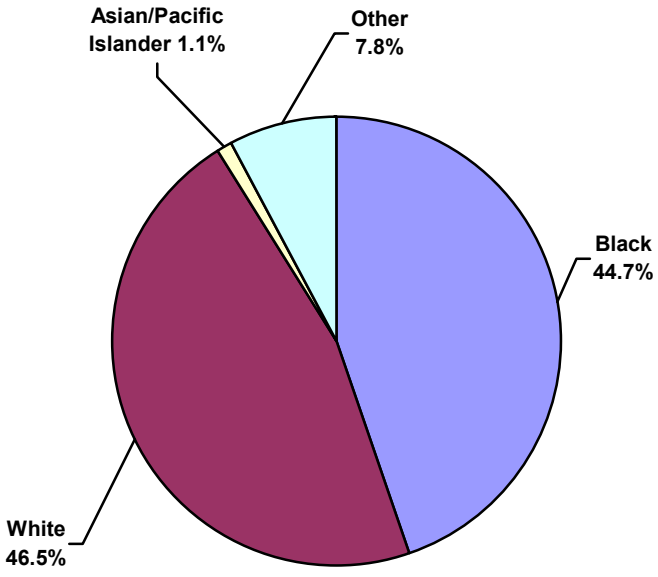
Figures 6 and 7 show the percentages of ESRD patients by race in the District and Network 5, respectively.

Figure 6. Newly Diagnosed Chronic ESRD Patients by Race in D.C., Calendar Year 1999 (n = 364)



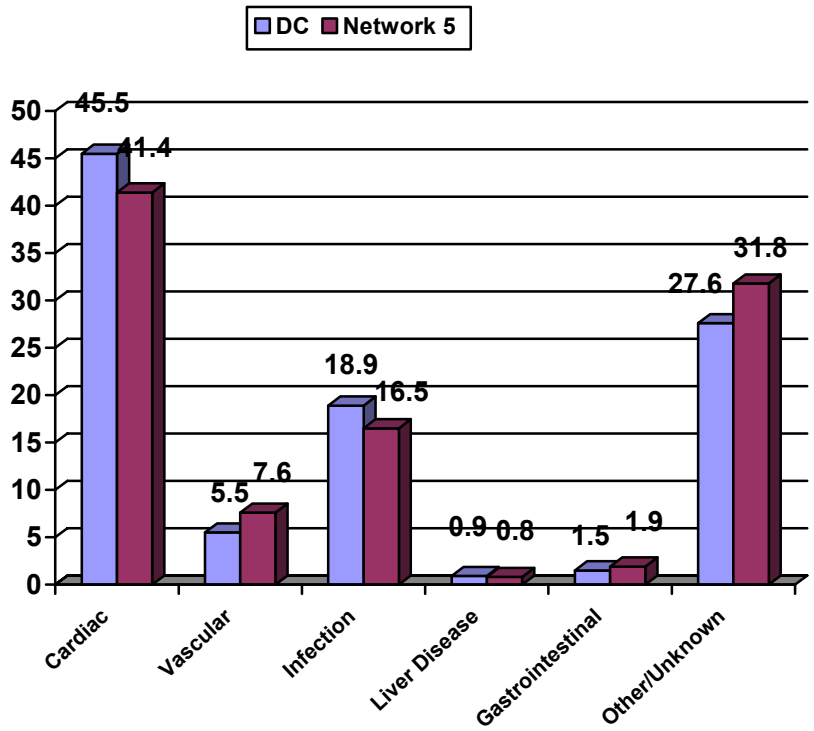
SOURCE: Mid-Atlantic Renal Coalition 1999 Annual Report

Figure 7. Newly Diagnosed Chronic ESRD Patients by Race in Network 5, Calendar Year 1999 (n = 6675)



SOURCE: Mid-Atlantic Renal Coalition 1999 Annual Report

Figure 8. Causes of Death for D.C. and Network 5 ESRD Patients in 1998 (n =323 deaths in D.C. and 1,779 in Network 5)



SOURCE: Mid-Atlantic Renal Coalition 1999 Annual Report

A comparison of the information in Figure 8 to identical information for 1994 shows that cardiac deaths increased from 39.6 percent in 1994 to 45.5 percent of all deaths in 1998 (State Health Planning & Development Agency, 1999; MARC, 2000). However, the increasing proportion does not seem to reflect a net increase in cardiac deaths, but rather a concurrent decrease in the proportion of death from infection, which declined from 26.7 percent to 18.9 percent. One explanation that has been offered of this decrease is the introduction of triple therapies for patients with HIV in the mid-1990s.

C. ESRD Treatment Options

There are only two types of treatments currently available to patients with ESRD:

(1) Renal dialysis, and
(2) Transplantation.

1. Dialysis

a. Dialysis techniques. Renal dialysis is a process used to cleanse the body of waste materials that would normally be removed by the kidneys. Hemodialysis and peritoneal dialysis are the two major types of dialysis. Hemodialysis is a blood purification process during which the blood is channeled through a hemodialyzer and machine containing a purifying solution called the dialysate. As the blood flows through the dialysis machine,

waste substances move across a semi-permeable membrane into the dialysate. Hemodialysis treatments generally last from 3.5 to 4 hours and are performed two to three times a week as prescribed by a physician. The patient is required to take these treatments for a lifetime unless an alternative form of treatment (transplantation) is performed.

The peritoneal dialysis process, on the other hand, does not involve channeling the blood out of the blood vessels. Instead, the dialysate is introduced into the peritoneal lining of the patient's abdomen where numerous blood vessels are located. Waste substances move from these blood vessels across the peritoneal membrane and are ultimately removed as the dialysate is released from the abdomen. There are several types of peritoneal dialysis: intermittent peritoneal dialysis (IPD), continuous ambulatory peritoneal dialysis (CAPD), and continuous cyclic peritoneal dialysis (CCPD). IPD is usually performed five days a week for approximately seven hours with a closed system reverse osmosis cycling machine.

The patient can perform peritoneal dialysis without assistance from others. During CAPD, the dialysate solution remains in the peritoneum 24 hours a day for seven days a week and removes the waste products from the bloodstream. The patient must exchange the solution three to five times a day. During each exchange, the dialysate is drained from the abdominal cavity through the plastic tube. CCPD is a process where the patient is connected to a machine that cycles several exchanges of dialysate. This procedure lasts approximately 10 to 12 hours and is usually performed at night. A small amount of dialysate remains in the abdomen during the day (Rosansky, 1983).

b. Settings. Dialysis may be performed in an outpatient freestanding facility, a hospital-based clinic or inpatient facility, a nursing home, or at home. Dialysis is staff assisted in all settings except the home; home dialysis patients may be trained in self-care and assisted by family members. Regardless of the setting for dialysis, it is necessary for the patient to have regular physical examinations, laboratory testing, and social, psychological, dietary, and nutritional services. It is also desirable for dialysis patients to have access to physical and vocational rehabilitation services. Providing these services in hospital-based and freestanding facilities can enhance patient convenience and improve utilization as well as improve the patient's quality of life. Patients who dialyze at home also require support services.

c. Utilization. Table 1 summarizes national, regional, and local utilization of in-facility and home dialysis modalities in 1999.

Table 1. Renal Dialysis Utilization in the U.S., Region 5, and the District by Modality, 1999

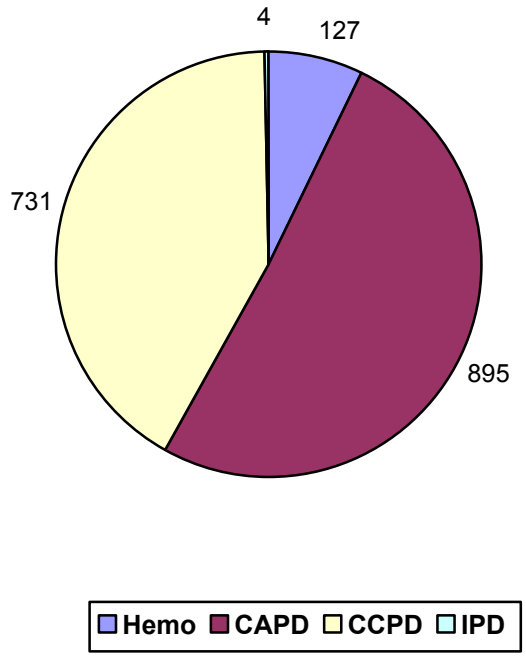
	U.S.		Region		D.C.	
	Actual Number	%	Actual Number	%	Actual Number	%
Center Hemo	212,601	87.4	14,600	87.0	1,503	92.9
Home Hemo	3,148	1.3	127	0.8	18	1.1
CAPD	13,406	5.5	895	5.3	50	3.0
CCPD	9,178	3.8	731	4.4	6	3.7
Other PD	213	.01	6	0.03	0	0
Uncertain	4,774	2.0	420	2.5	---	-
TOTAL	243,320	100.0	16,779	100.0	1,632	100.0

Source: Mid-Atlantic Renal Coalition

Table 1 demonstrates that the most common treatment modality is in-center hemodialysis. As of December 31, 1999, in the region as a whole, 1757 of 16,779 patients (10.5 percent) served by Network 5 facilities received home dialysis services. Utilization of home dialysis was somewhat lower in the District, where 129 of 1,632 (7.9 percent) of ESRD patients were dialyzed at home. The proportion remained very close to the same in 2000 (1709 out of a total of 15,014 patients in the region received home dialysis services -11.4 percent).

By contrast in 2000, there were 15,014 patients in Network 5 receiving in-center dialysis, including 1,564 in the District. A total of 1709 patients were receiving home dialysis, including 113 in the District. In 2000, 102 of the 113 patients who received in-home dialysis underwent some form of peritoneal dialysis.

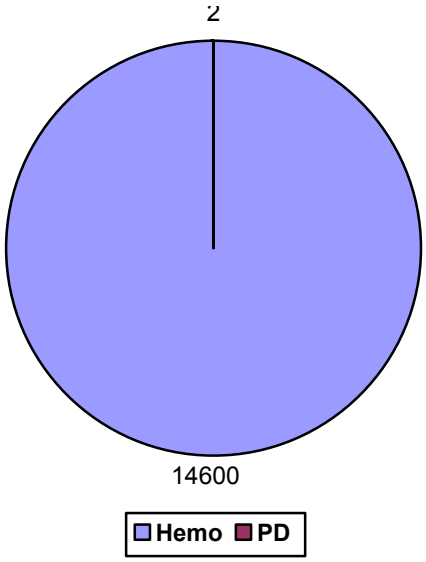
Figure 9. Home Dialysis Modalities in Network 5, Calendar Year 1999 (n = 1,757)



SOURCE: Mid-Atlantic Renal Coalition 1999 Annual Report

As shown in Figures 9 and 10, most home dialysis patients in Network 5 underwent peritoneal dialysis in 1999; in contrast, the overwhelming majority of in-center patients (all but two) received hemodialysis.

Figure 10. In-Center Dialysis Modalities in Network 5, Calendar Year 1999 (n = 14,602)

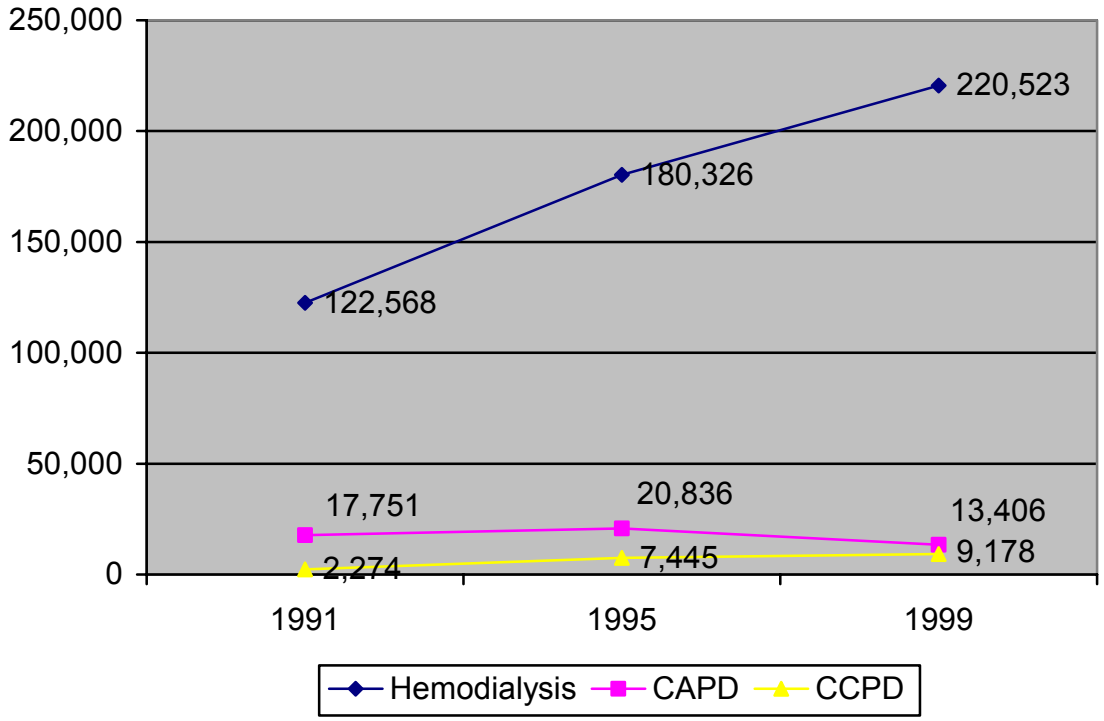


SOURCE: Mid-Atlantic Renal Coalition 1999 Annual Report

NOTE: Excludes 420 patients whose dialysis method is unknown.

The number of people receiving dialysis has increased. Figures 11 and 12 show the trends in dialysis modality from 1991 to 1999. In all, home dialysis modalities were used by 10.7 percent of ESRD patients in 1999—down from 16.7 percent in 1991.

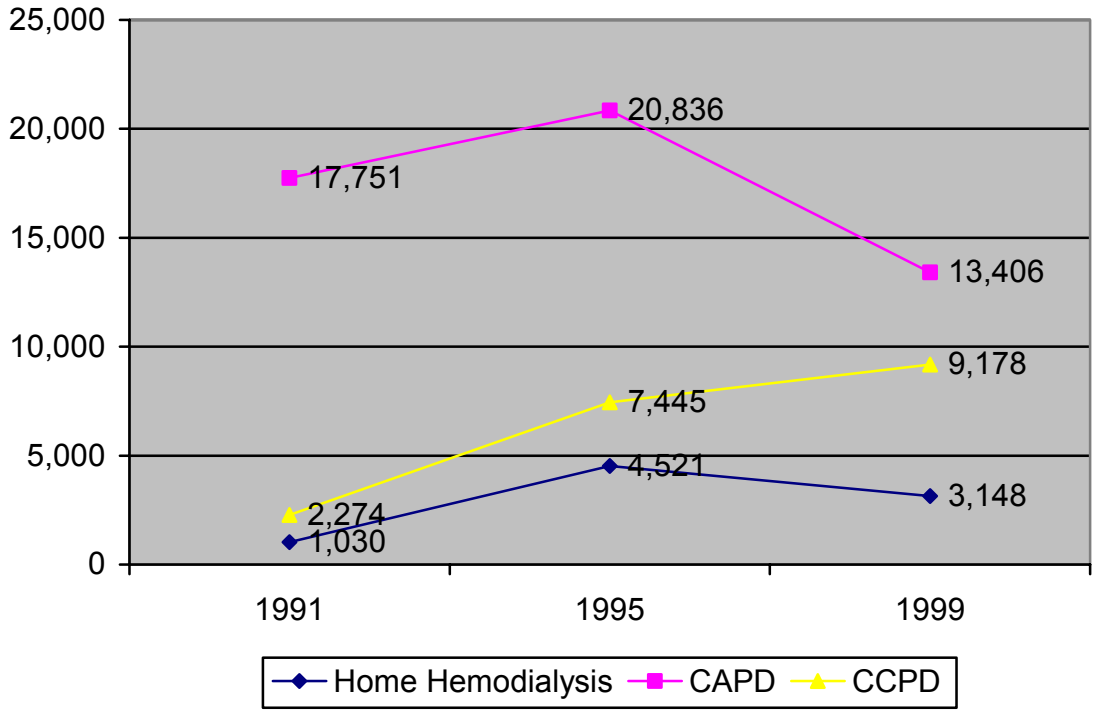
Figure 11. Trends in ESRD Dialysis Modalities in the U.S., 1991 to 1999



SOURCE: U.S. Renal Data System, 2001. 2001 Atlas of ESRD in the US. (http://www.usrds.org.)

The number of patients on dialysis is expected to continue to grow in a manner consistent with the continued aging of the "baby boomers" and the increase in the incidence and prevalence of diabetes. According to the National Kidney Foundation (2001c), the number of Americans with diabetes increased by 33 percent from 1990 to 2000, primarily as a result of an increase in obesity. Some 16 million Americans have diabetes, with the number expected to rise to 22 million by 2025. Diabetes, as previously mentioned, is the most common cause of new cases of kidney failure in the United States each year. The sharpest increase in dialysis utilization is expected among people aged 30 to 39.

Figure 12. Trends in ESRD Home Dialysis Modalities in the U.S, 1991 to 1999



SOURCE: U.S. Renal Data System, 2001. 2001 Atlas of ESRD in the US. (http://www.usrds.org.)

2. Renal Transplantation

Renal transplantation - a surgical procedure during which the patient receives a healthy kidney from a living, related or cadaveric donor - is generally the preferred method of treating ESRD. It serves as a permanent solution, provides patients with more freedom and flexibility, and improves life expectancy significantly as indicated below. The following findings concerning tranplantation outcomes in 1999 are:

- The five-year survival rate for cadaveric kidney recipients was 81.6 percent.
- For living donor kidneys, the survival rate was 91.0 percent (United Network for Organ Sharing, 2001b).
- For patients on kidney waiting lists, the survival rate was 63.1 deaths per 1000 patients per year (UNOS 2001c).

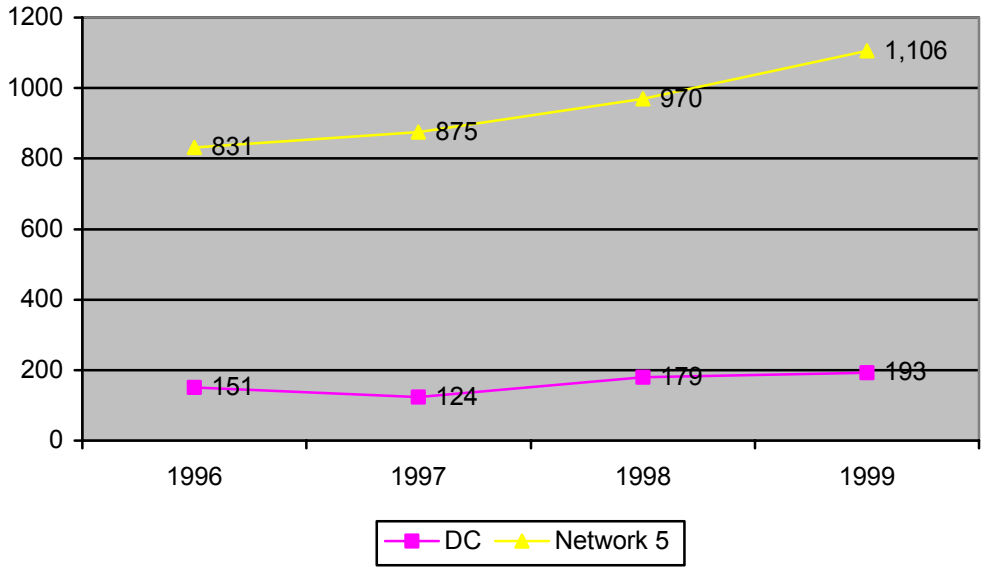
In light of these improved outcomes and advantages to transplantation, the number of transplants performed has increased. In 2000, there were 13,290 kidney transplants (UNOS, 2001a) performed within the U.S. Kidney transplants have also increased in the District and in Network 5 in recent years. As shown in Figure 13, the average annual percentage increase in kidney transplants from 1996 to 1999 was 10.1 for the network and 8.3 percent for the District. The total number of kidney transplants performed in

Network 5 was 1187 in calendar year 2000, 170 of those transplants occurred in the District.

Although the number of renal transplants surgeries has increased, the number of people awaiting transplants has also increased. Nationwide, as of July 27, 2001, there were an over 49,500 patients waiting for kidney transplants in the United States; based on the number of transplants performed in 2000 (13,290), only a fraction of patients were expected to receive these desperately needed organs (UNOS 2001a). The District, according to the Mid-Atlantic Renal Coalition Annual Report, 2000 reported that 738 patients were awaiting kidney transplants at the end of calendar year 2000. Of note is that some of these patients are placed on more than one waiting list.

In Network 5 more than 4,000 ESRD patients were awaiting transplants (MARC, 2000). A transplant status survey conducted by MARC (2000) revealed that, in 1998, 25.5 percent of Network 5 ESRD patients were awaiting kidney transplants—up from 14 percent in 1990. In the District, 20.9 percent of dialysis patients were waiting for transplants. As the availability of donors has not increased along with the growing demand, the gap between available organs and suitable recipients has nearly doubled since 1990 (UNOS, 2001c).

Figure 13. Number of Kidney Transplants in the District and Network 5, 1997-1999



SOURCE: U.S. Renal Data System, 2001. 2001 Atlas of ESRD in the U.S. (http://www.usrds.org.)

D. Significant and Emerging Issues

Some of the current issues relating to ESRD services in the District and Network 5, including dialysis services in nursing facilities are: dialyzer reuse, AIDS, hepatitis-B,

hepatitis-C, transmission, hypertension and diabetes, ESRD facility licensure, data collection, and home dialysis.

1. Dialysis Services in Nursing Facilities

The provision of dialysis services in nursing facilities is becoming an issue as sicker patients are being admitted to these institutions. Currently, most staff-assisted dialysis services are provided in outpatient chronic dialysis facilities, requiring sick and frail patients to endure the hardships imposed by travel to obtain needed treatments, and adding transportation expenses to the cost of care.

Dialysis services are reimbursed through Medicare Part B and paid to those facilities that meet the ESRD conditions of coverage. In the past, because Medicare reimbursed for this service exclusively on an outpatient basis, it was difficult for inpatients to obtain dialysis in the nursing facility. If services were provided on an inpatient basis in the nursing facilities, they were reimbursed as home dialysis through Medicare Part B, which does not cover staff costs. Therefore, most residents were transported by ambulance to outpatient facilities. However, nursing facilities are now beginning to provide dialysis services on the premises.

CMS currently considers these units to be outpatient dialysis facilities in their own right. As such, they are required to maintain their own Medicare provider numbers. In light of the changes in reimbursement policies it is anticipated that there will be an increase in utilization of services in nursing facilities.

2. Dialyzer Reuse

Approximately 80 percent of dialysis units in the United States reuse dialyzers (Tokars et al., 1998). It is estimated that the percentage of District facilities that reuse dialzers is comparable. It is likely that those who have chosen to reuse dialyzer do so at a great expense, because it is necessary to install special ventilator systems in order to reuse dialyzers. In addition, facilities often must make physical plant accommodations and meet stringent standards as a licensing requirement.

There are several issues related to the reuse of dialzyers. In order to reuse dialyzers, they need to be disinfected using Renalin or formaldehyde. Formaldehyde is a toxin that has been associated with cancer and liver damage. This substance can sometimes get trapped in the devices after reprocessing and can enter the bloodstream of dialysis patients. Other potential problems resulting from reuse include blood tubing ruptures, blood loss, and red blood cell destruction. To help prevent these problems, CMS and the District currently review reuse procedures during their facility audits for Medicare certification. In addition, patient informed consent is required for all dialyzer reuse.

3. Hepatitis Transmission

Hepatitis is an inflammation of the liver that can be caused by viruses, bacteria, drugs, or chemical toxins and is most often contracted through contact with infected blood. Because the blood from the hemodialysis patient is removed from the body, this increases the risk that the hepatitis virus may enter the bloodstream. There are several different forms of the Hepatitis virus. Hepatitis B virus (HBV) enters the dialysis unit and is contracted by the patient. The patient may develop acute hepatitis or become a chronic Hepatitis B surface antigen carrier. Chronic carriers are capable of contaminating environmental surfaces and transmitting the infection to others. Staff members are also placed at risk of HBV infection through contact with infected blood via accidental needle punctures or breaks in their skin.[3]

Control of the hepatitis viruses has improved due to increased vaccination rates, screening of blood transfusions, and the isolation of patients who have the virus. Since 1987, a Hepatitis-B vaccine has been available and costs approximately $195 for a three-injection treatment.4

Hepatitis C is increasingly becoming a problem in the general population and particularly with HIV/AIDS patients who are living longer with HIV infection. Although Hepatitis C is not as easily transmitted as Hepatitis B, both patients and staff should take universal precautions and staff and patients should be vaccinated against Hepatitis B before initiating dialysis or initiating dialysis treatment to reduce infection (Centers for Disease Control and Prevention, CDC, 1988).

4. Vancomycin-Resistant Enterococcus and Methicillin-Resistant Staphylococcus Aureus

Infections with resistant bacteria are becoming an increasing problem in chronic dialysis patients. In 1995, 8.7 percent of Network 5 facilities reported treating one or more VRE-positive patients; by 1999, this figure had increased fivefold, to 42.8 percent of facilities (MARC, 2000). Significant risk factors for VRE include hospitalization, which increases exposure to VRE-positive patients, and functional status and URR, which are associated with severity of illness. It thus appears that VRE colonization is widespread, particularly in hospitals. Methicillin-resistant Staphylococcus aureus (MRSA) also poses a threat to dialysis patients. Further difficulties arise when outpatient dialysis centers refuse to readmit patients who have acquired infections during hospitalization.

In a special study of drug-resistant bacteria in Network 5, the CDC observed 2,028 patients and found that 326 antimicrobial starts were initiated (MARC, 2000). Most frequently prescribed were Vancomycin (58.6 percent of starts), Gentamycin (31.3 percent of starts), and Cefazolin (24.9 percent of starts). The most frequent reasons for antimicrobial starts were nonaccess site infections (46.3 percent) and access site infections (29.8 percent). Unknown reasons accounted for 7.1 percent of starts.

[3] MMWR December 26, 1997/46(RR-18);1-42
[4] AWP, [August, 2001]

Of the 326 antimicrobial starts, only 115 (35.3 percent) were accompanied by blood cultures, and of the 155 cultures, only 39.1 percent were positive. These data suggest that more widespread use of blood cultures is needed to document infection and allow for more judicious use of antimicrobials (MARC, 2000). Pursuant to this report, MARC has contemplated the implementation of educational interventions to encourage the use of blood cultures. Further, to minimize the problems with VRE, MRSA, and other resistant microbes, strict infection control procedures should be followed at all levels of care rendered to hemodialysis patients.

5. Hypertension and Diabetes

Hypertension and diabetes have been identified as primary causal factors of ESRD. This is of particular importance when one considers the high prevalence rates for hypertension and diabetes in the District. Hypertension, or high blood pressure, is a chronic illness and often leads to cardiac, circulatory, or kidney disease. Similarly, diabetes is a forerunner of circulatory and kidney disease. Primary prevention (i.e., a healthy lifestyle) can help prevent hypertension and diabetes, and early detection and intervention can prevent complications of these chronic diseases.

6. ESRD Facility Licensure

Currently, dialysis facilities are not licensed in the District; however they are required to meet Medicare conditions of coverage, certification and apply for Certificate of Need. The Health Regulation Administration (HRA) within the DOH has the authority to ensure that the facilities adhere to all of the Medicare standards. However, Medicare reviews are conducted once every five years. As a result of such infrequent monitoring, when problems do occur, they may be magnified over time before being identified and remediated. Currently, local licensing regulations are being written by the DOH Health Regulation Administration to cover all types of chronic dialysis (hemodialysis, CCPD, CAPD) in adult and pediatric populations and in different settings, including nursing homes. Anticipated implementation of these regulations in January of 2002 will facilitate quality of care in District outpatient dialysis facilities as well as home dialysis.

7. Data Collection

Network 5 collects data on patient demographics (age, sex, race, state of residence), primary diagnosis (hypertension, diabetes, kidney disease), treatment modality (hemodialysis, CAPD, CCPD, IPD) and treatment setting (home vs. in-center) and state of origin. The CDC collects and periodically reports data on comorbidities and dialysis-related diseases, including hepatitis, VRE, and MRSA. CDC does not, however, maintain an inventory of operating dialysis chairs, shifts of operation, or patient loads. These data are nevertheless needed in order to evaluate the need for additional units or services.

8. Home Dialysis Utilization in the District

Home dialysis utilization in the District is relatively low (7.9 percent) when compared with the network (10.5 percent) and the United States (10.79 percent). All treatment modalities (hemodialysis, IPD, continuous ambulatory peritoneal dialysis, and continuous cyclic peritoneal dialysis) can be done at home. The major advantage of home dialysis is that patients have more freedom than they do with outpatient dialysis, for which they have to visit a facility two or three times a week.

Several factors, including facility location and patient characteristics such as health status, age, and income, may help determine the best modality for a given patient. Home dialysis utilization is generally higher in rural areas where dialysis providers serve large geographic areas. In the District, several dialysis facilities are located near major transportation lines, a possible reason why home dialysis utilization is lower.

Additionally, home hemodialysis requires the assistance of a trained partner, and many District patients live alone. Finally, a home hemodialysis unit requires specific plumbing and electrical changes that some landlords may not allow.

III. SUMMARY RESOURCE INVENTORY AND HISTORICAL UTILIZATION OF SERVICES

A. Inventory

The Summary Resource Inventory is a composite list of District dialysis facilities and services. Five lists are included: Adult In-Facility Services, Nursing Facility-Based Dialysis Services, Acute or Hospital-Based Dialysis Services, CAPD Training Centers, and Pediatric Dialysis Facilities. These are presented in Tables 1.a. through 1.e.

Table 1.a. Adult In-Facility Dialysis Services in the District of Columbia - 2002

	STATIONS APPROVED	STATIONS OPERATED
BMA of Capitol Hill 900 M. Street, SE	18	18
BMA of Columbia Heights 106 Irving Street, NW05	30	30
BMA of Dupont Circle 11 Dupont Circle, NW	30	30
BMA of East River Park 3929 Minn. Ave, NE	18	18

	STATIONS APPROVED	STATIONS OPERATED
BMA of Martin L. King 2141 Martin L. King, Ave., SE	11	11
BMA of Northeast 817 Varnum Street, NE	20	20
BMA of Southeast Washington 1350 Southern Avenue, SE	12	12
Capital Dialysis, LLC 140 Q Street, NE	20	20
Da Vita on the Potomac 3223 K Street, NW	11	11
Da Vita Union Station 810 First Street, NE	16	16
Gambro Healthcare, 8th Street 300 8th Street, NE	24	24
Gambro Healthcare 3857-A Penn Ave., SE	15	15
Gambro Healthcare 1920 N Street, NW	20	20
D.C. General Satellite 1901 E Street, SE	7	0
Greater Southeast Hospital 1310 Southern Ave., SE	4	0
Howard University Hospital 2112 Georgia Ave., NW	22	22
Washington Hospital Center 110 Irving Street, NW	10	10
Gambro Healthcare, Georgia Avenue 4905 Georgia Ave, NW	13	13

	STATIONS APPROVED	STATIONS OPERATED
Gambro Healthcare, Brentwood 1201 Brentwood Road, NE	22	22
TOTAL	**323**	**312**

Note: D.C. General Satellite dialysis stations were administered by Greater Southeast Community Hospital (GSCH). All seven stations were closed on March 31, 2003. The four stations at GSCH are patient self-care dialysis units.

Table 1.b. Nursing Facility-Based Dialysis Services

	STATIONS APPROVED	STATIONS OPERATED
Da Vita of Grant Park 5000 Nannie H. Burr. Ave., NE	6	6
Hadley Memorial Hospital 4601 Martin Luther King, Jr., SW Washington, DC 20032	3	0
Northwest Self Care Center 3333 Wisconsin Ave, NW	6	6
TOTAL	**15**	**12**

Source: Health Regulations Administration

Table 1.c. Acute or Hospital-Based Dialysis Services

	NUMBER OF STATIONS
Children's National Medical Center	6
George Washington University Hospital	7*
Georgetown University Hospital	5
Howard University Hospital	4
Medlink Hospital	1
Providence Hospital	7

Sibley Memorial Hospital	2
Washington Hospital Center	8
TOTAL	**40**

***** Four of the GW stations are fixed, and three mobile units serve the ICU.
Source: *Telephone survey of area hospitals, August 2001.*

Table 1.d. CAPD Training Facilities

BMA of Columbia Heights
106 Irving Street, NW
Washington, D.C. 20010

Children's Hospital
111 Michigan Avenue, NW
Washington, D.C. 20036

Da Vita of Grant Park
5000 Nannie Helen Burrough Ave., NE
Washington, DC 20019

Da Vita of Lee Street
5155 Lee Street, NE
Washington, DC 20019

Da Vita of Union Station
810 First Street, NE
Washington, DC 20002

Da Vita on the Potomac
3223 K Street, NW
Washington, DC 20007

Gambro Healthcare, Georgia Avenue
4905 Georgia Avenue, NW
Washington, DC 20011

Gambro Healthcare
3857-A Pennsylvania Avenue, SE
Washington, DC 20020

Gambro Healthcare
1920 N Street, NW
Washington, D.C. 20036

Gambro Healthcare
300 8th Street, N.E.
Washington, D.C. 20002

Georgetown University Hospital
3800 Reservoir Road, NW
Washington, D.C. 20007

Howard University Hospital
2112 Georgia Avenue, NW
Washington, D.C. 20060

Table 1.e. Pediatric Dialysis Facilities

Children's National Medical Center
Georgetown University Hospital (as-needed, acute inpatient basis)

B. Utilization

Table 1 shows utilization of renal dialysis in the District of Columbia for the most recent reporting period, 1999, for all facilities.

IV. PROJECTIONS

In forecasting the future need for dialysis services, this plan focuses on in-facility, staff-assisted dialysis services in the District of Columbia. Treatment options that are not addressed here include: patient-maintained dialysis, or self-dialysis, and pediatric ESRD, because of its low incidence (according to MARC, there were only 20 reported cases in the District in 1999).

Two factors are assumed to impact the number of dialysis stations that will be needed in the future: the historical trend of utilization increase and the rate of increasing population in the District of Columbia. In isolating these factors, a number of key assumptions are made:

- The proportion of ESRD patients receiving dialysis in facilities, not at home, remains the same over the period to 2007 (92 percent assisted, 8 percent at home).
- The factors that determine patient compliance and preference, ultimately having a significant effect on demand, do not change over time such that the proportion of individuals with ESRD who seek and obtain dialysis remains constant.

- The incidence and prevalence of underlying medical conditions (principally diabetes and high blood pressure) continues to change at the same rates as for the period over which the trend was observed (1991-1999).
- Factors associated with age, race, and sex are held constant since demographic models that use U.S. Census figures (Claritas, for example) have not yet been updated to develop advanced projections for 2007. In particular, projections that forecast the number of African Americans based upon the risk factors described here will be useful in forecasting demand more precisely.

A. Population Increases

The increasing trend observed through the mid-1990s occurred during a period when population estimates have been questioned in light of the undercount, which was confirmed during U.S. Census 2000. Instead of sharp declines, population decline leveled off and the current population trend is increasing.

With a more accurate census in 2000, it is clear that the District of Columbia's population is increasing. Table 3 shows an updated projection based upon blending the U.S. Census 2000 figure with the rate of increase projected by the Metropolitan Washington Council of Governments (MWCOG). It yields a projected population for the District at 593,059 with an increase in population of about 3.7 percent from 2000-2007. That population change will be incorporated into the need projection for assisted dialysis.

B. Utilization Increases

It is reported that the number of individuals on dialysis increased by 5.8 percent per year from 1991 through 1998. This increase is largely attributable to the increase in the number of cases combined with the compliance and preferences of people with ESRD. Therefore, it is appropriate to add this factor to population increases. Although the approach seems to be a "high-range" estimate, it is reasonable given the assumptions outlined above.

Table 3. District of Columbia
Adjustment of Population Projection

U.S. Census 2000	572,059
Metropolitan Washington Council of Governments	
Estimated 2000 (based on 1990 census)	518,100
Projected 2005	523,500
Projected 2010	554,700
Average (mid-2007) of 2005 and 2010	539,100
Add adjustment for U.S. 2000 census (U.S. 2000 – MWCOG 2000)	53,959
Revised Projected Population, 2007	**593,059**
Rate of change, 2000 – 2007	3.7 percent
Average annual rate (3.7 percent / 7 years)	.53 percent

1. U.S. Census 2000 estimate from published data, U.S. Census website
2. MWCOG, *Growth Trends to 2025*, reports projections for total population for five-year increments 2000-2025 based upon a range of vital statistics, as well as economic, sociodemographic, and other trends
3. Average projected 2007 population is calculated by totaling 2005 and 2010 projections and dividing by two.
4. 2007 Estimate Adjusted is the sum of the difference between MWCOG estimates for 2000 and actual U.S. Census 2000 added to the Average Projected 2007 population.

C. Need Projections: Staff-Assisted Dialysis Services

This methodology presents a model in which these factors and assumptions are taken together to estimate the need for staff-assisted dialysis services in 2007. Table 4 outlines the stepwise process of developing the forecast and then comparing the forecast to existing capacity. Following Table 4 is a narrative summary of the steps.

Summary of Methodology by Steps

1. Identify the base year from which current utilization will be calculated, 1999.
2. Add the 5.8 percent annual increase (compounded) assumed per year since 1999 to estimate current number of persons receiving assisted dialysis.
3. Project 5.8 percent increases (compounded) over the planning period.
4. Calculate the additional persons receiving dialysis by population growth factor, which is projected to be 3.7 percent over the planning period.
5. Total Steps 2 – 4 to estimate number of persons in 2007.
6. Add the total stations in dialysis facilities and the total stations in nursing facilities for total capacity.
7. Convert the number of stations into a capacity (number of persons per station) by calculating the number of patients that can be served each week and dividing by the number of sessions per person per week. Finally, multiply this maximum number of procedures by .85 for optimal operating capacity of 85 percent of maximum.
8. Divide the optimal number of procedures by the number of existing to determine the capacity of 350 stations in terms of the number of patients that can be served.
9. & 10. Calculate a range of additional stations by calculating the same optimal number as though it is 100 percent. Compare to existing capacity by subtracting existing capacity from projected requirement in 2007.

Table 4. Staff-Assisted Dialysis
Need for Additional Stations

1. Base Utilization 1999 (Table 2)	1632
2. Adjustment to current year, 2001 (not yet reported)	
Additional persons receiving dialysis services at	
annual increase of 5.8 percent to present	195
Total estimated persons, 2001	1,827
3. Annual increase of 5.8 percent compounded	
each of six years to 2007	735
4. Add total adjustment for population increase	
3.7 percent of 2001 estimate (Table 3)	68
5. Total number on assisted dialysis, 2007 (sum 2. - 4.)	2,630
6. Existing stations (Tables 1.a. and 1.b.)	350
7. Capacity of existing stations	

Daily capacity, 3 shifts per day	1,050
Weekly capacity, 6 days operation per week	6,300
Three procedures per patient per week	2,100
Optimal capacity (adjusted for 85% operation)	1,785
8. Patient capacity per station (at 85 percent operation)	5
9. Stations required to meet 2007 demand (85% operation)	526
Additional stations needed to for 85% operating level	176
10. Stations required to meet 2007 demand (100% operation)	438
Additional stations needed to for 100% operating level	88

In August of 2001, the District had 335 approved adult chronic hemodialysis stations and 15 nursing home stations approved (see Tables 1.a. and 1.b.), for a total of 350 stations. Using the criteria outlined above for availability/need, the 350 stations could accommodate 2,100 patients at 100 percent utilization and 1,785 at 85 percent utilization.

Current estimated levels of utilization, at 1,827 patients, is then above the optimal level of operation of 85 percent but remains comfortably below the 100 percent level. However, to meet the projected 2007 demand, an additional 88 to 176 stations will need to be added between 2001 and 2007.

V. CRITERIA AND STANDARDS

This section focuses primarily on in-center chronic hemodialysis for adults, for which the demand is greatest. Also addressed, *where relevant*, are dialysis in nursing homes, pediatric dialysis, home dialysis, acute dialysis facilities, and CAPD training. Criteria and standards for transplantation are discussed in this chapter.

A. Availability

1. *In-facility Adult Hemodialysis*

The availability standards for in-facility hemodialysis services for adults are as follows:

1. Dialysis capacity in the District of Columbia should be sufficient to meet the needs of all District residents

    - Chronic maintenance hemodialysis stations should be available in the numbers specified in the need methodology.
    - No expansion of a dialysis facility shall be approved until the facility's utilization rate is 85 percent (3.0 shifts a day, six days a week) and it

can be demonstrated that other facilities with unused capacity cannot appropriately meet the needs of potential patients.
- New facilities should be approved only when the system wide utilization rate is 85 percent and above, and when the applicant can demonstrate that other facilities with unused capacity cannot meet the demand for services.

2. New facilities and facilities requesting expansion should demonstrate that

- Training for home hemodialysis and peritoneal dialysis will be available to all potential home dialysis patients with appropriate additional support services in and out of the home.
- Training for self-care in-facility hemodialysis and adequate facility-based self-care stations will be available.
- The facility is operating all stations for which it has received Certificate of Need approval.

3. Nursing Facilities

The availability standards for staff-assisted dialysis in nursing facilities are as follows:

- Dialysis services should be available for frail elderly and hard-to-place patients residing in District nursing facilities to the extent that these services can be shown to be financially self-supporting.
- New facilities should be limited to a minimum of four stations.
- No expansion of the dialysis facility shall be approved until the facility's utilization rate is 85 percent and it can be demonstrated that other facilities with unused capacity cannot appropriately meet the needs of potential patients.
- Facilities requesting expansion must demonstrate that at least 75 percent of their patient population is residents of the nursing facility.

4. Home Dialysis and CAPD Training

At the end of 2000, there were 1,709 patients on home dialysis in Network 5, including 832 on CAPD, 796 on CCPD, 81 on home hemodialysis, and none on IPD. The total number on home dialysis had declined from 1,932 in 1996. In the District, there were a total of 113 patients on home dialysis with CCPD being the preferred modality (52), followed by CAPD with a total of 50 patients. The number on home dialysis declined from 1,932 in 1996 to 1709 - 11.5 percent decrease (MARC, 2000). In the District, the number of patients on home dialysis decreased from 155 in 1996 to 113 in 2000 (MARC, 2000).

Currently, CAPD training is offered at 12 of the 22 outpatient dialysis facilities in D.C. In order to enhance patient choice, it will be increasingly important for facilities to offer

training for this method of treatment. However, it is important to note that one of the key limitations to home dialysis use, as discussed previously, may be the absence of a trained partner and/or the inability of the electrical and plumbing systems to handle the specific requirements of a home hemodialysis unit.

5. Pediatric Dialysis

Due to the fact that the number of pediatric dialysis patients in the District is small and is not expected to dramatically change in future years, and existing dialysis capabilities are adequate to serve this population, no separate projections are offered for pediatric ESRD patients. This does not preclude the possibility, however, that the demand for these services could increase.

B. Accessibility

1. *In-facility Services*

- Dialysis services should be located to meet the needs of patients rather than for the convenience of caregivers.
- Preference should be given to facilities that agree to provide transportation for patients who are physically and/or financially incapable of arranging this service.
- All facilities must demonstrate how the entrance to and exit from the facility can accommodate people with disabilities, consistent with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA).

- A review of 2000 patient origin data by zip code revealed that most of the District dialysis patients live in the Northwest (38 percent) and Northeast (38 percent) quadrants of the city. Approximately 14 percent reside in Southeast Washington and 10 percent in Southwest. By way of comparison, of the 350 approved stations in D.C. in 2001, 143 were in Northwest, 139 in Northeast, 65 in Southeast, and three in Southwest Washington (Hadley Memorial Hospital).

It thus appears that, based on the location of existing facilities, accessibility of dialysis services is not a problem for most city residents. However, future facilities should be established in areas with fewer facilities, notably in the two southern quadrants.

It is important for dialysis providers to facilitate access. Thus, facilities should provide transportation in situations where the patient is physically and/or financially incapable of arranging this service and must explain how this service will be provided. A small number of patients have required this service in the past. Facility social workers are generally able to find a means of transportation for these patients. Although Medicare does not reimburse facilities for patient transportation, Medicaid does provide payment for this service.

In the past, facilities may be geographically appropriate but patients receiving treatments may live in the opposite end of the city. This is due primarily to the practice of referring nephrologists. One of the criteria recommended is that all dialysis facilities be required to have open admission for nephrologists. This would facilitate an environment where patients could be referred to facilities close to where they live or work. This would also reduce the Medicaid expenditures for transportation services.

2. ***Nursing Homes***

No access standards are offered for dialysis at nursing centers because these services are by definition accessible.

3. ***Acute Services***

Acute services provided in hospital settings must comply with rules and regulations for all hospitals.

4. ***Home Dialysis***

No access standards are offered for home dialysis because these services are by definition accessible.

5. ***Pediatric Dialysis***

No standard is offered for pediatric services because Medicaid covers transportation expenses and because the number is small.

C. Continuity

The continuity standard for *all* ESRD services is as follows:

The following additional chronic care services should be available and documented in or through hemodialysis facilities to support the needs of the dialysis patient:

- Hemodialysis and home training agreement with other facility or center
- Nutritional counseling and diet management
- Pharmacotherapy and laboratory services
- Status evaluation
- Health care counseling
- Psychological support services
- Social services and case management
- Personal support services
- Vocational counseling services
- Rehabilitation services.

In addition, all facilities should provide educational programs on transplants and work closely with transplant centers to inform the patient(s) or legal guardian of their options.

Facilities should have designated isolation stations and ensure that patients who have been recently admitted to the hospital secondary to infections be readmitted and a space held for these patients.

To achieve all of these standards, it is important that facilities have affiliation agreements with other service providers and planning agencies to support patient needs, to enhance utilization, and to encourage independence.

D. Quality

According to regulators and providers, the patient population in the District is becoming older and developing an increasing number of chronic illnesses. As stated earlier, many of the District's dialysis patients are diabetic and medically unstable and therefore require more assistance, resulting in longer lengths of time to initiate and end each treatment process.

Many dialysis facilities in the District schedule 10-, 13-, and 16-hour shifts for their staff. According to the Health Regulation Administration (HRA), this is a growing trend and there are no facilities that currently offer eight-hour shifts.

Because it is important that patients be monitored appropriately, HRA is recommending a new standard stating that the staff-to-patient ratio shall be maintained at a ratio of 1 to 3 to ensure the adequacy of the treatments. The charge nurse shall not be included in the staff-to-patient ratio. This 1 to 3 ratio is based on the 1994 Centers for Medicare and Medicaid (CMS), formerly HCFA interpretive guidelines. (More recent guidelines did not include this requirement.)

Currently, dialysis facilities are not licensed in the District but are required to meet Medicare conditions of participation and maintain CMS certification. The HRA has oversight to ensure that the facilities adhere to all of the Medicare standards. HRA does not have local regulations, only 10 percent of the facilities are reviewed, as required by Medicare each year, and many are only reviewed every five years. They are in the process of developing regulations. As a result of such infrequent monitoring, when problems do occur they are magnified over time. Passage of local regulations will allow the District to monitor these facilities more frequently.

Quality standards for *all facilities* are as follows:

- All providers of ESRD services shall demonstrate quality of care for all of their facilities through substantial compliance with all Medicare certification requirements for at least two years prior to the date of submission of the Certificate of Need application. Substantial compliance is indicated by a record

of no more than one repeated deficiency for a violation of the same standard and no repeated deficiencies for violations that immediately threaten the patient's health and safety.

- Any provider requesting to establish a *new* facility must apply for Medicare and Medicaid certification within three months after Certificate of Need approval. Existing providers requesting expansion must demonstrate a pattern of continuing compliance with Medicare certification requirements as defined above.
- Providers shall institute a quality assurance program that incorporates the standards for the adequacy of the dialysis treatment as established by the network and the Renal Physicians Association.
- Providers shall maintain a staff-to-patient ratio of 1 to 3 for regular dialysis treatments. The charge nurse shall be a registered nurse and shall not be included in the staff-to-patient ratio. However, staff should be assigned two patients to one staff when a ventilator patient is being dialyzed.
- All providers will meet local licensure laws.
- Dialysis staff providing services in nursing facilities must receive additional training in the care of the geriatric patient. Competency testing should be done on an annual basis.
- When dialysis services are provided in a nursing facility, direct patient care nursing staff should receive additional training in the care of the dialysis patient. Additionally, annual in-services should be given to nursing facility staff, especially the Certified Nurse's Aides. Ideally, the new staff orientation programs should incorporate a section on the care of dialysis patient.
- Quality improvement meetings should be held monthly to ensure that issues and concerns are addressed in a timely manner and all pertinent logs for water quality are reviewed. There should be evidence of communication between the nursing units and dialysis staff.
- The medical director should evaluate the care being provided and provide documentation monthly.

The implementation of quality assurance and improvement activities is a major goal for CMS, which implemented a broad Health Care Quality Improvement Program (HCQIP) in 1994. One component of the HCQIP is the ESRD Core Indicator Project, whose purpose is threefold:

- To assist ESRD providers in improving care delivered to dialysis patients;
- To compare the prevalence of important clinical characteristics for adult ESRD patients; and
- To identify opportunities to improve ESRD care.

The Core Indicator Project focuses on the collection of data on measurable treatment outcomes, including the following:

- Adequacy of dialysis measured by urea reduction ratio (URR)

- Anemia management measured by hematocrit
- Hypertension measured by pre/post dialysis diastolic and systolic blood pressure
- Nutritional status measured by serum albumin.

Network 5 encourages member facilities to use these core indicators in their internal quality assurance activities.

- The second major component of CMS's HCQIP is the National Cooperative Anemia Project (NCAP). Anemia is very common among dialysis patients, and guidelines for the care of anemic persons are accepted and well defined. Accordingly, the goals of the NCAP are to improve the management of anemia in the dialysis population, educate dialysis caregivers in using quality improvement techniques to describe and improve care, and decrease the proportion of patients with hematocrits < 31. This project was implemented on a national basis in 1996 (MARC, 1997). MARC reports annually on both the ESRD core indicators and the NCAP indicators for Network 5.

E. Acceptability

The acceptability standards for all facilities services concern reuse of dialyzers and transducer filters, as follows:

- Providers who reuse dialyzers must ensure that policies and procedures for reuse of dialyzers will be consistent with guidelines developed by the Association for the Advancement of Medical Instrumentation, the National Kidney Foundation, and established Occupational Safety and Health Administration standards for air quality.
- Providers who intend to reuse dialyzers must comply with DC Law 6-215 and must give written assurance that patients will have the right to refuse treatment with reprocessed dialyzers and/or other supplies. Patients will also have the right to receive treatment using a new state-of-the-art dialyzer. The applicant shall agree must include a statement of these rights in the patient's handbook and in the facility's operations manual. The operations manual shall contain a reference that attending physicians are required to verbally inform every patient of their right to refuse treatment using reprocessed dialyzer and dialysis supplies. These rights should also be posted in a public area within the facility.
- Reuse of transducer filters should conform to national and local standards and laws. (Transducer filters are small plastic covers containing filters that prevent blood or fluid from entering pressure monitoring systems on dialysis machines).
- Currently, the Association for the Advancement of Medical Instrumentation and the National Kidney Foundation both have standards for the reuse of dialyzers. However, these standards are not based on scientifically controlled clinical studies. The standards require providers to document that policies and procedures for the reuse of dialyzers and other supplies are consistent with guidelines developed by the Association for the Advancement of Medical Instrumentation

and the National Kidney Foundation, and with D.C. Law 6-215. Air quality standards should be consistent with Occupational Safety and Health Administration levels.

F. Cost

The ESRD program is administered through the Medicare program under Section 2991 of the Social Security Amendments of 1972 (Public Law 92-603), which became effective July 1, 1973. With the enactment of P.L. 92-603, the ESRD program became the first federal program with financial responsibility for all persons with a specific diagnosis. The following are the stated goals of the federal ESRD program:

- To assist beneficiaries with ESRD to receive the care they need
- To encourage proper distribution and effective utilization of ESRD treatment resources while maintaining and improving the quality of care
- To provide the flexibility necessary for the efficient delivery of appropriate care by physicians and facilities.

Amendments to the ESRD program in 1978 expanded the goals of the federal ESRD program to encourage self-dialysis or transplantation for the maximum number of patients who are suitable candidates for these treatments.

In an attempt to achieve a reduction in the cost of the ESRD program, CMS established a new prospective reimbursement system in 1983. In 1986, the payment rate was decreased slightly and then increased in 1988. The current Medicare rates for facility dialysis and self-care training are shown in Table 5.

Table 5. Medicare Payments for Dialysis and Self-Care Dialysis Training, with and without Routine Laboratory, by Type of Dialysis, 2001

Method	Physicians on Alternative Method (1)	Physicians Not on Alternative
Maintenance Hemodialysis		
With routine laboratory	138	150
Without routine laboratory	133	145
Self-Care Dialysis Training		
With routine laboratory	158	170
Without routine laboratory	153	165
Extended Peritoneal Dialysis (20-29 hours)		
With routine laboratory	207	225
Without routine laboratory	199.50	217.50
Extended Peritoneal Dialysis (30 or more hours)		
With routine laboratory	414	450
Without routine laboratory	399	435
Self-Care Intermittent Peritoneal Dialysis Training		
With routine laboratory	158	170
Without routine laboratory	153	165
Self-Care Continuous Ambulatory Peritoneal Dialysis Training		
With routine laboratory	150	162
Without routine laboratory	145	157

(1) The alternative reimbursement method for physician services is described in Section 901.3 of the HCFA Provider Reimbursement Manual, Part 2 (HCFA Publication 15-2-9).

SOURCE: Medicare Renal Dialysis Facility Manual, Chapter IV, Reimbursement. See http://www.hcfa.gov.

HCFA adjusts the payments in Table 5 to reflect local differences in the cost of care. The current Medicare reimbursement rate for maintenance dialysis, including basic laboratory work, is $135 in the District. Medicaid currently reimburses facilities $162 per treatment, but does not reimburse for home dialysis. Medications are reimbursed separately.

VI. GOALS AND OBJECTIVES

Goal 1:
To implement an integrated ESRD data reporting system within the Health Regulation Administration

Objectives:

1.1: Collect facility-specific utilization data on the number of shifts per day and the number of patients served on an annual basis.
1.2 Develop a data collection system focusing on facility utilization and patient specific information on diagnoses and origin.

Goal 2:
To increase the use of self-care dialysis or home dialysis among District ESRD patients

Objectives:

2.1: Encourage the development of self-care services either in the facility or at home for District ESRD patients.
2.2: Encourage more providers to offer home dialysis and self-care dialysis training in their facilities.
2.3 Provide support services that are culturally sensitive and stations for in-facility self-care.
2.4 Increase ESRD provider and public awareness of the various special needs of disabled ESRD patients.

Goal 3:
To reduce or stabilize the District ESRD incidence rates by the year 2002 so that they do not exceed the 1999 incidence rate of 80.5 per 100,000

Objectives:

3.1 Reduce the mortality with diabetes as the primary cause of death among District residents to 22.9 per 100,000 people. (Baseline: 28.7 per 100,000 residents in 1996 (CDC 1999).

3.2 Reduce the mortality with diabetes as the primary cause of death among African American residents to 30.9 per 100,000 population (Baseline: 38.7 per 100,000 population in 1997 [crude rate]).
3.3 Increase to 49.8 percent the proportion of District residents with diabetes who report ever hearing of hemoglobin A1c or knowing what a hemoglobin A1c measurement is. (Baseline: 25.9 percent of diabetic residents so reported in the 1997 BRFSS).
3.4 Reduce the proportion of adult residents with high blood pressure to no more than 10 percent. (Baseline: 19.3 percent of adult residents reported being diagnosed with high blood pressure in 1997. Source: BRFS).

Goal 4:
To increase the availability of transplantation as an option by taking steps to address the lack of available donor organs, in particular among minority populations.

Objectives:

4.1 Collaborate with the National Minority Organ Tissue Transplant Education Program (MOTTEP) to address the shortage.

Goal 5:
Implement a quality improvement program in the District that meets the standards of the federal Health Care Quality Improvement Program (HCQIP), which is a part of the ESRD Core Indicator Project.

Objectives:

5.1 Assist District ESRD providers in improving care delivery to dialysis patients by encouraging continuing education in current treatment methods.
5.2 Compare the prevalence of important clinical and social characteristics for adult and pediatric ESRD patients in the District.
5.3 Ensure that all District ESRD providers shall demonstrate adequate quality of care through compliance with Medicare, Medicaid and applicable national accreditation organizations.